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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,407	10/19/2000	Thierry Kretz	RCA-90419	4982
22850	7590	03/31/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			AWAD, AMR A	
			ART UNIT	PAPER NUMBER
			2675	

DATE MAILED: 03/31/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/623,407

Applicant(s)

KRETZ ET AL.

Examiner

Amr Awad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 U.S.C. § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US patent NO. 5,426,447) in view of Masahiko (Japanese patent Publication NO. 63-261326 with a complete translation provided herewith by the Examiner).

As to claim 1, Lee (figure 1) teaches a process for displaying data on a matrix display (14) (column 4, lines 22-38). Lee (figure 2) teaches N data lines (data lines  $D_1$  to  $D_{384}$ ; i.e.,  $N = 384$ ) and P selection lines (row lines 1-z; i.e.,  $P = 240$  the example in figure 1) at the intersections of which are situated the image points or pixels (column 5, lines 31-37 and column 6, lines 33-41). Lee teaches that the N data lines are grouped into  $P'$  blocks of  $N'$  data lines (Lee teaches X groups wherein the example shown in figure 2 has 6 groups, each group includes 64 data lines) (column 5, lines 52-57), wherein  $N = P' \times N'$  (the number of data lines is 384 which is equal to the number of groups (6) multiplied by the number of data lines for each group (64)). Lee teaches that each block receiving in parallel one of the  $P'$  data signals (video signal supplied to data line  $D_1$  to  $D_{64}$  for the first group) which is demultiplexed on the  $N'$  lines of the block (column 6 lines 48-60).

Lee does not expressly teach alternately, according to the selection lines, the scanning of the N' data lines of a block is carried out from 1 to N' and from N' to 1.

However, Masahiko teaches a active matrix electrooptic device (figure 1) that includes alternately and reversely setting the scanning order of selected pulses from left to right and right to left (see the last five lines of the main paragraph in page 8 of the translation)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Masahiko of having the scanning of the display portion (i.e, display block) carried out in opposite direction to be incorporated to Lee's device so as motivated by Masahiko, to maintain a good display quality without striking brightness irregularity in an active matrix liquid crystal display(first paragraph of page 3 of the translation).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Masahiko as applied to claim 1 above, and further in view of Kwon (US patent No. 5,850,216).

As to claim 2, note the discussion of Lee and Masahiko above. As can be seen above, Lee and Masahiko teach all the limitations of claim 2 except the citations of scanning from the first to last line then from last to first is carried out every second line.

However, Kwon (figure 5) teaches a bidirectional scanning wherein the scanning from left to right (GL1 line) and then from right to left (GL2 line) is carried out every second selection line (column 6, lines 26-35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Kwon having the scanning carried out alternately every second line (odd and even lines) to be incorporated to Lee's modified device so as indicated above, to avoid the retrace period (the time required to return to the first line) and therefore increasing the speed of addressing and scanning of the display device. Furthermore, to provide uniform brightness by scanning the display alternately from both sides and therefore avoiding having the first written line brighter than the line written last.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Masahiko as applied to claim 1 above, and further in view of Koyama et al. (US patent NO. 6,177,920; hereinafter referred to as Koyama).

Note the discussion of Lee and Masahiko above. As seen above, Lee and Yamazaki teach all the limitations of claim 4 except the citations of at least one programmable logic circuit associated with line counter determining the reversal direction of the scan.

However, Koyama teaches an active matrix display having the direction of selecting the signal lines or the scanning lines can be readily changed to forward or backward by selecting whether the synchronous counter is operated at the rise of the clock signal (up-count) or at the fall thereof (down-count), and the bidirectional driving is enabled without an increase in number of drive circuits (column 9, lines 44-50). Note

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that an example of the counter as disclosed by Koyama is logic circuit shown in figure 6 (column 5, lines 51-53 and column 6 lines 33-34).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Koyama having a logic circuit counter for determining the direction of the scanning to be incorporated to Lee's modified device so as motivated by Koyama, the bidirectional driving is enabled without an increase in number of drive circuits (column 9, lines 44-50).

### ***Allowable Subject Matter***

5. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art of the record either singularly or in combination teaches or fairly suggests a scanning direction from first to last lines (1 to N') and from last to first lin (N' to 1) carried out for four successive selection lines, the scan being carried out in a first direction for two successive selection lines and in a second direction for the other two succeeding selection lines.

### ***Response to Arguments***

7. Applicant's arguments filed January 22, 2004 have been fully considered but they are not persuasive.

Applicant (page 3) argued that Lee does not disclose alternately scanning of the N' data lines of a block from 1 to N' and from N' to 1 according to the selection lines as recited in claim 1, and that Masahiko, like Lee, does not disclose alternately scanning of the N' data lines of a block from 1 to N' and from N' to 1. Examiner respectfully disagrees.

Examiner respectfully submits that Applicant cannot show non-obviousness by attacking references individually where as here the rejections are based on combination of references. In rejecting claim 1, the examiner based his rejection on the combination of Lee and Masahiko. Lee does not teach alternately scanning of the N' data lines block from 1 to N' and from N' to 1, but teaches dividing the data lines into blocks from 1 to N'. Masahiko does not teach alternately scanning from 1 to N' and from N' to 1, but teaches alternately scanning from 1 to N and from N to 1 (i.e., the entire data lines). Examiner believes that by combining the teaching of Masahiko having alternate scanning to the data lines to Lee's device; the outcome of the combination would be a display device has blocks of data lines, and capable of alternately scanning from 1 to N' and from N' to 1 as claimed.

Applicant (bottom of page 3) argued that in Masahiko, the columns are divided into a right column and a left column, where the right column is scanned in first direction while the left column is scanned in an opposite direction, but the scan directions are not reserved for alternate lines as recited in claim 1. Examiner respectfully disagrees. First

by simply having the right column is scanned in first direction and the left column is scanned in the second direction; it fairly reads on the claimed limitations because the device is scanned in different directions. Second, Masahiko shows that the data is sequentially supplied to line Y1-Ym, which means that the supplying of data is carried out one after another (col. 8, lines 5-14). Finally, Masahiko clearly shows that alternately flipping of the directions of the scanning (abstract).

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday-Friday, between 9:00AM to 5:30PM.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703)305-9720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Amr Ahmed". The signature is stylized with a large, sweeping loop at the end.

A.A.